side was equally unsuccessful. At some old fumaroles on the 1872 crater plain, I collected some crusts of boric acid and alum, both rare products at this volcano.

One of three terminations we may expect to these phenomena, which are very characteristic of a lateral disruption, so common at Vesuvius:—

(1) Should the lava cool sufficiently to plug the radial dyke, no further phenomena will occur, and activity will be restored to the central vent.

(2) If this plugging only partially takes place, lava may dribble forth for months, but probably the escape of vapour will soon be restored to the central vent.

(3) If the rent should widen, considering how low it extends, we may expect a grand eruption which might rival that of 1872, which commenced near the same spot and much in the same way; the mechanism by which this occurs I have explained elsewhere.[1]

My best thanks are due to Mr. L. Sambon for his company and help, and to Mr. E. Treiber, Inspecting Engineer of the Vesuvian Railway, for kind information.

Naples, June 9. H. J. JOHNSTON-LAVIS.

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[1] H. J. J. L., "The Relationship of the Structure of Igneous Rocks to the Conditions of their Formation," Scientific Proceedings R. Dublin Soc., vol. v., New Ser., pp. 112-56.

NOTES.

A LARGE and influential meeting was held at Edinburgh on Monday to consider the arrangements which ought to be made for the visit of the British Association to that city next year. The Lord Provost presided. On the motion of Sir William Turner the following were elected Vice-Presidents:—The Lord Provost, the Marquis of Lothian, the Earl of Rosebery, Lord Kingsburgh, Principal Sir William Muir, and Prof. Sir Douglas Maclagan. A local executive committee was chosen, and Mr. A. Gillies Smith was appointed honorary local treasurer. In a letter from Mr. Griffiths, secretary of the Association, it was stated that Sir Archibald Geikie, who will preside over the Edinburgh meeting, was in favour of the meeting being held early in August. A considerable majority, however, voted in support of a proposal that the meeting should begin on Wednesday, September 28.

ON July 28 and the three following days, at Bournemouth, the British Medical Association will hold its fifty-ninth annual meeting under the presidency of Dr. J. Roberts Thomson. The scientific business of the meeting will be conducted in nine sections. An address in medicine will be given by Dr. Lauder Brunton; an address in surgery by Prof. Chiene; and an address in public medicine by Dr. Cox Seaton.

A PHYSICAL Observatory, furnished with specially designed apparatus for the prosecution of investigations in radiant energy and other departments of telluric and astro-physics, has been established as a department of the Smithsonian Institution. The communication of new memoirs bearing in any way on such researches is requested, and for them it is hoped that proper return can be made in due time.

THE *Standard* understands that on the vote for the salary of the President of the Board of Trade, either Sir Henry Roscoe or Sir Lyon Playfair will call attention to the action of the Government with regard to the proposed Institute of Preventive Medicine.

THE Committee of the French Academy has decided, by five votes to four, that the prize of 20,000 francs should be given to M. Elisée Reclus, author of the well-known "Nouvelle Géographie Universelle." It is expected that the Academy will ratify the decision.

ACCORDING to a Reuter's telegram from Simla, dated June 12, Drs. Rake and Buckmaster have succeeded in cultivating the leprosy bacillus in serum. They were aided in their researches by Surgeon-Major Thomson.

IN reply to Mr. Bryce, in the House of Commons on Monday, the Lord Advocate stated that it would be the duty of the Government during the ensuing year not only to weigh very carefully the claims of secondary education in Scotland as one of the interests competing for a share of the additional Scotch grant, but also to prosecute further inquiries as to the means by which any grant available for that purpose might be usefully applied. Many proposals had already been submitted to and considered by the Scotch Education Department, and these, as well as any suggestions which might be made, would receive further careful consideration. The Government would also endeavour to bring all necessary statistics down to the latest date, so as to afford the necessary information for the solution of all branches of this difficult question.

THE funeral of Sir Richard Burton took place on Monday at the church of St. Mary Magdalene, Mortlake. The tomb represents an Arab tent, with a crucifix over the entrance. The interior is a small chapel with altar and some Oriental lights.

IT has been decided that a Geographical Society shall be formed at Liverpool. A preliminary committee has been appointed, and it has issued a circular stating the objects of the new body.

ACCORDING to a telegram sent through Reuter's Agency from Naples on June 16, the flow of the lava stream from Vesuvius had stopped, and Signor Palmieri, the Director of the Observatory on the mountain, had expressed his belief that the outflow might be regarded as at an end.

SLIGHT but continuous earthquake shocks were felt at Verona on June 10; and on the 11th, at 8.30 a.m., a very violent shock occurred at Tregnano and Badia Calavena. This was plainly felt in Verona also. Another violent shock occurred at Tregnano on the 13th, and on the 15th shocks were reported from Castelnuovo, Peschiera, Somma Campagna, and Desenzano.

THE first volume of a new meteorological Review has been published, containing observations taken in the south-west of Russia for the year 1890. This system was organized by Prof. A. Klossovsky in 1886, and now numbers nearly 600 observers. The observations refer chiefly to temperature, wind, rainfall, &c., for climatological and agricultural purposes. The Review also contains several articles of importance, *e.g.* (1) on phenological phenomena; (2) on the harvests in connection with meteorological observations; (3) on the movements of clouds; (4) actinometric observations made at Kieff. These are written in the Russian language only; the positions of the stations, and various data referred to in the text, are illustrated by maps and diagrams.

AT a meeting of the Royal Statistical Society, on Tuesday, a paper was read by Mr. Noel A. Humphreys, Secretary of the Census Office, on the results of the recent census and estimates of population in the largest English towns. The first part of the paper was devoted to the consideration of the recently-issued results of the census in April last in the twenty-eight large English towns dealt with in the Registrar-General's weekly returns. It was pointed out that, although the increase of population within the present boundaries of these towns showed an increase of nearly a million in the last ten years, the increase was less, by considerably more than half a million (605,318), than would have been the case if the rate of increase had been the same as in the preceding ten years, 1871-81; and that the rate of movement of population showed striking variations in the different towns. The rate of increase in these twenty-eight towns, it was stated, has pretty constantly declined in recent years, and has fallen with scarcely a break during the last five intercensal periods from 24·3 per cent. in 1841-51 to 11·0 per cent. in 1881-91. The percentage of increase within the boundaries of registration London (practically those of the county of London) declined in the same period from 21·2 to 10·4. The rate of actual decline of population in central London continues to increase, and the rate of increase of the other parts of the metropolis, including even the aggregate outer ring of suburban districts, continues to decline. Examined in detail, the provincial towns show, with few exceptions, the operation of similar laws; actual decrease in the central portions, and marked decline in the rate of increase in the other portions, the latter being specially noticeable in those towns with comparatively restricted areas. This examination, while showing the marked general decline in the rates of increase in these towns, discloses striking variations in the rates of increase in successive census periods. Mr. Humphreys called attention to the fact that these striking changes in the rates of movement of population in the large towns interpose the greatest difficulty in estimating, even approximately, their population in intercensal periods. The estimate of population in Liverpool, based upon the rate of increase between 1871 and 1881, exceeded the recently enumerated number by more than 100,000, or by 20 per cent.; while in Salford the percentage of over-estimate, by the same method, was 26 per cent. Thus the recent birth-rates and death-rates in these two towns have been under-estimated by no less than a fifth and a fourth, respectively. The various methods that have been at different times suggested for estimating the population of towns in intercensal years, in substitution of Dr. Farr's method, still used by the Registrar-General's Department, were severally considered, and it was shown that no hypothetical method yet devised affords reasonable promise of satisfactory results. It was therefore urged that a quinquennial census could alone supply a remedy for the present difficulty, which threatens to impair the public faith in death-rates, the failure of which would most seriously hinder and imperil the health progress of the country.

AT the meeting of the Linnean Society of New South Wales, on April 29, Mr. T. W. Edgeworth David exhibited, on behalf of Mr. J. E. Carne, Mineralogist to the Department of Mines, Sydney, a specimen of precious opal from the White Cliffs about fifty miles northerly from Wilcannia. Precious opal and common opal have lately been discovered in this locality in a formation corresponding to the Desert Sandstone of Queensland. The opal occurs disseminated as an infiltrated cement throughout the mass of the sandstone in places, and also replacing the calcareous material of fossils. It also occurs in cracks in the sandstone and in fossil wood, which is somewhat plentifully distributed throughout the sandstone, and occasionally replaces part of the original woody tissues of the silicified trees.

MRS. J. KING VAN RENSSELAER contributes to the Proceedings of the U.S. National Museum an interesting paper on the playing cards used in Japan. They are more distinctly original, she says, than any others, and show no marks of the common origin which the Italian, Spanish, German, French, Hindoo, and Chinese cards display. Forty-nine in number, they are divided into twelve suits of four cards in each suit. One card is a trifle smaller than the rest of the pack, and has a plain white face not embellished with any distinctive emblem, and this one is used as a "joker." The other cards are covered with designs that represent the twelve flowers or other things appropriate to the weeks of the year. Each card is distinct and different from its fellows, even if bearing the same emblem, and they can be easily distinguished and classified, not only by the symbolic flowers they bear, but also by a character or letter that marks nearly every card, and which seems to denote the vegetable that represents the months. The only month that has no floral emblem is August, and that suit is marked by mountains and warm-looking skies.

PROF. D'ARCY W. THOMPSON has edited an interesting volume of "Studies from the Museum of Zoology in University College, Dundee." The volume consists of the first twelve numbers of a journal in which the zoologists connected with the Dundee University College hope to find "an incentive to their own diligence, a way of communication with the outer world, and a means of giving direction and consecutive purpose to all their work." The editor contributes five papers, and the writers associated with him are Miss Mary L. Walker, Prof. H. Leboucq, Dr. H. St. John Brooks, Mr. Alexander Meek, and Prof. W. K. Parker.

AN interesting illustration of the antagonistic action of poisons is mentioned in the current number of the *Pharmaceutical Journal.* Dr. Mueller, of Yackandandah, Victoria, has written a letter in which he states, says our contemporary, that in cases of snake bite he is using a solution of nitrate of strychnine in 240 parts of water mixed with a little glycerine. Twenty minims of this solution are injected in the usual manner of a hypodermic injection, and the frequency of repetition depends upon the symptoms being more or less threatening, say from 10 to 20 minutes. When all symptoms have disappeared, the first independent action of the strychnine is shown by slight muscular spasms, and then the injections must be discontinued unless after a time the snake poison reasserts itself. The quantity of strychnine required in some cases has amounted to a grain or more within a few hours. Both poisons are thoroughly antagonistic, and no hesitation need be felt in pushing the use of the drug to quantities that would be fatal in the absence of snake poison. Out of about 100 cases treated by this method, some of them at the point of death, there has been but one failure, and that arose from the injections being discontinued after 1¼ grain of strychnine had been injected. Any part of the body will do for the injections, but Dr. Mueller is in the habit of making them in the neighbourhood of the bitten part or directly upon it.

THE Rev. J. Hoskyns-Abrahall writes to us that on June 10, about 10.30 p.m., near Woodstock, he saw what he describes as "a beautiful phenomenon." "Suddenly," he says, "at the zenith, east of the Great Bear, shone forth a yellow globe, like Venus at her brightest. Dropping somewhat slowly, it fell obliquely southward. As it passed in its brilliant career, it lighted up its dusky path with a glorious lustre. When it had descended about half-way down toward the horizon, it burst into a sparkling host of glowing fragments, each dazzlingly shot over with all the hues of the rainbow."

THE Register of the Johns Hopkins University for 1890-91 has been issued. It contains a great mass of well-arranged facts relating to the work of that flourishing institution.

MR. C. FRENCH, Government Entomologist at Melbourne, is contributing to the *Victoria Naturalist* a series of notes on the insectivorous birds of Victoria. In the first paper, which appears in the May number, he describes the Australian Bustard (*Choriotis australis*). Some months ago Mr. French made an appeal to the Victorian Government for the permanent protection of this, the most useful insect-destroying bird in the colony. His appeal was supported by the Council of the Zoological Society of Melbourne; and the Government has not only acceded to the request, but has placed the matter before the Government of New South Wales, who, it is hoped, will at once see the necessity for the preservation of so valuable a bird.

DR. A. KOENIG has issued as a separate volume the account of his ornithological observations made during his explorations in Madeira and the Canary Islands. It is a notable memoir, and several new species and sub-species of birds are described. He is somewhat severe on some British ornithologists for having tried to forestall him in the description of the Chaffinch of Palma, which he was the first to discover. The editor of the *Journal für Ornithologie*, in which the paper first appeared, also adds some strictures on the ways of British naturalists. Dr. Koenig apparently has some grounds for his complaint, but a *tu quoque* argument could be upheld against him, for he persists in calling a *Regulus* by his new name of *satelles*, though he admits that it is *Regulus teneriffæ* of Seebohm, and he does not refer to the British Museum "Catalogue of Birds," in which he will find that his identifications of the Madeiran and Canarian *Fringillæ* were all published long before he gave them to the world as new facts. These small matters do not, however, affect the importance of the essay, which is worked out with remarkable care, and is, in fact, a monographic review of the ornithology of Madeira, Teneriffe, and Palma. Eight coloured plates illustrate the article.

In a paper lately read before the Scientific Section of the Manchester Literary and Philosophical Society, Mr. John Watson maintains that the re-development of lost limbs is not unusual among insects. He himself has had three cases in which limbs have been re-developed, and one case of complete cicatrization. Re-development, he says, can take place either at the larval or the pupal stages of an insect's metamorphosis.

The British Consul at Hankow, writing of the varnish exported from that city, says he is informed that it is the gum of a tree—the *Rhus vernicifera*. On this tree, before daylight, incisions are made; the gum that runs out is collected in the dark, and strained through a cotton cloth bag, leaving behind a large amount of dirt and refuse. This operation can only be performed in the dark, as light spoils the gum and causes it to cake with all the dirt in it. It cannot be strained in wet weather, as moisture causes it to solidify. When the Chinese use this varnish, they rub it on with a sort of mop, or swab, made of soft waste silk. It should only be used in wet weather, as, if the atmosphere is dry when it is rubbed on, it will always be sticky. As used by the Chinese, the varnish takes about a month to dry, and during the time it is drying it is poisonous to the eyes. The Consul thinks that this gum may have been one of the ingredients of the celebrated Cremona varnish, and he suggests that it might be worth the while of musical instrument makers to make experiments with it with a view to producing a varnish that would give a mellow instead of a glassy sound.

The Insect-house in the Zoological Society's Gardens is now in excellent order, and well deserves a visit. In addition to the Silk-moths that are usually present during the warm weather, the Papilioninæ, or Swallow-tail butterflies, afford at the present time the chief display. The perfect insects of several species of the genus *Papilio* have appeared—*P. cresphontes*, *ajax*, and *asterias* from North America, *P. alexanor* from the Mediterranean shores, and the handsome *P. maackii* from Japan. The last-named has been seen for the first time in the house this year, and offers a striking contrast to the other species of the genus that have previously been exhibited in the Gardens, it being of black and golden-green colours instead of the yellows and blacks that we are accustomed to in our European Swallow-tails. *P. cresphontes* has appeared in large numbers in the house, but no varieties have been obtained. This also is the first season for two other beautiful Papilioninæ, viz. *Doritis apollina* from Asia Minor, and the Japanese *Sericina telamon*. The latter shows considerable difference in the markings of the sexes. The North American *Limenitis disippus* can be at present seen in all its stages, and is well worthy of attention, the caterpillar moving along the leaf-stalks with a peculiar interrupted gait. Of the Sphinx moths, the South European *Deilephila alecto* has already appeared, and *D. nicæ* is expected. These insects are, however, not seen to advantage in confinement, as their superb powers of flight cannot be displayed in a small compartment. Two examples of the Orthoptera are alive in the house—*Diaphemora femorata*, one of the Stick- or Twig-insects from North America, and *Empusa egena* from Southern Europe. The former has been reared from eggs laid in the Insect-house, but these progeny are not so healthy as those obtained from freshly-imported eggs. The *Empusa* is of a most bizarre form, and belongs to the family Mantidæ, the species of which feed only on living creatures. The public is indebted to Mr. S. H. Carver for the opportunity of seeing living scorpions; he has sent examples of two species of this group from Egypt, both of which unfortunately are unidentified, there being obvious difficulties in the way of carrying about live scorpions and comparing them with dried specimens. There is a third scorpion, from South Europe, living with its Egyptian congeners; it has a small delicate tail, and is altogether a less frightful creature, though assuming a menacing attitude with equal readiness. A spider, *Lycosa portosantana*, from Madeira, is healthy, and is a fine creature, though insignificant by the side of its neighbour, a huge *Mygale* from South America. The latter, as well as the scorpions, is fed with mice, which are given to it dead, though in its native haunts a *Mygale* has been known to prey on living individuals of these small mammals.

In the current number of the *Board of Trade Journal* some interesting facts as to cotton cultivation in Russian Turkestan are given, on the authority of a Russian correspondent of the *Monde Économique*. After the submission of the Khanates of Central Asia, the trade of the country was carried on chiefly with the towns of Russia in Europe, and was confined at first to the export in small quantities of cotton grown from native seeds, of rice, raw silk, and other similar products. It is only during the last ten years that the industry of the country has extended to any considerable degree, owing to the ingress of speculators, and has changed its primitive character. There have been established all kinds of works and factories, and in 1884 the cultivation of cotton of American origin was essayed. This trial succeeded so well that all classes of society, including even public officials, devoted themselves to this culture, which has become one of the chief branches of industry in the country. The new cotton produced in Central Asia is equal to that of America, and finds an excellent outlet among the cotton spinneries and mills of Russia. But the consumption in European Russia does not suffice for the ambitious aims of native producers, and they look forward to the possibility of opening up trade in the foreign markets of Europe.

The new number of the *Internationales Archiv für Ethnographie* fully maintains the reputation of this excellent periodical. Among the contents is a paper in which Dr. J. D. E. Schmeltz continues his elaborate account of the collections from Corea in the ethnographical museum at Leyden. Dr. Heinrich Schurtz has an interesting article on the geographical distribution of negro costume. As usual, the plates illustrating the various contributions are most carefully executed.

A further communication upon the new peroxide of sulphur, SO_4, by Prof. Traube, of Breslau, will be found in the current number of the *Berichte*. This interesting substance is obtained when solutions of sulphuric acid containing at least 40 per cent. of acid are subjected to electrolysis, as a crystalline deposit upon the anode. The crystals were first observed some time ago by Berthelot, but were considered by him as identical with the oxide S_2O_7, which he had previously obtained by the action of the silent electrical discharge upon a mixture of sulphur dioxide and oxygen. Prof. Traube, however, finds that the substance obtained at the anode in the electrolysis of 40 per cent. solutions of sulphuric acid is represented by the formula SO_4, and is quite a different substance from Berthelot's S_2O_7. It is, as predicted by

Mendeleeff, not the anhydride of an acid, but a neutral oxide of a similar chemical character to hydrogen peroxide. It may be best separated from the excess of 40 per cent. acid by removing the latter, after dilution with three times its volume of water, by means of freshly prepared barium phosphate. It cannot, however, be preserved in pure water, as it parts with oxygen so readily, becoming reduced thereby to ordinary sulphuric acid. That it is not an anhydride is proved by the fact that it yields no salts of the type K_2SO_5 with alkalies. Neutral solutions containing it, in which it appears to be permanent, may be readily prepared by neutralizing the solution in 40 per cent. acid with caustic soda, potash, or magnesia. The properties of SO_4 in either acid or neutral solution are somewhat remarkable. When boiled in contact with platinum wire or platinum black it is energetically decomposed with evolution of quantities of oxygen. If the neutral solution is employed, it becomes strongly acid. Indigo solution is oxidized and decolorized slowly, but instantly if a little ferrous sulphate is added. SO_4, however, in spite of this ready decomposition into oxygen and sulphuric anhydride, is but a weak oxidizing agent, being incapable even of oxidizing oxalic acid or carbon monoxide. But under certain circumstances it acts as a powerful reducing agent. For instance, if an emulsion of peroxide of lead in 40 per cent. sulphuric acid is brought in contact with a quantity of similar acid which has been subjected to electrolysis so as to charge it with SO_4, a rapid evolution of oxygen gas occurs, and the peroxide of lead is converted into ordinary sulphate of lead. In a similar manner precipitated peroxide of manganese is rapidly reduced to manganous sulphate with evolution of oxygen, and silver peroxide likewise dissolves up to a clear solution of silver sulphate with violent effervescence due to the escape of oxygen. Prof. Traube regards sulphur peroxide as built up on the type $SO_2(O_2)$, resembling hydrogen peroxide, H_2O_2. He considers that Berthelot's oxide, S_2O_7, is a molecular compound of SO_3 and SO_4, for it does not dissolve in water without decomposition, breaking up into sulphuric anhydride and oxygen, which is evolved. On the other hand, it appears, like SO_4, to be perfectly stable in a moderately concentrated solution of sulphuric acid.

THE additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus* ♂) from India, presented by Mr. James B. Leckie; a White-fronted Amazon (*Chrysotis leucocephala*) from Cuba, presented by Mrs. Lacabra; a Radiated Tortoise (*Testudo radiata*) from Madagascar, an Angulated Tortoise (*Chersina angulata*), three Smooth-bellied Snakes (*Homolosoma lutrix*) from South Africa, presented by the Rev. G. H. R. Fisk, C.M.Z.S.; a Green Lizard (*Lacerta viridis*) from France, presented by Mrs. Hill; three Horned Lizards (*Phrynosoma cornutum*) from Texas, presented by Mr. James E. Talmage; five Squirrel-like Phalangers (*Belideus sciureus* ♂ ♂ ♂ ♀ ♀) from Australia, a Grand Eclectus (*Eclectus roratus*) from Moluccas, deposited; two Elliot's Pheasants (*Phasianus ellioti* ♀ ♀) from China, two Rufous Tinamous (*Rhynchotis rufescens*) from Brazil, purchased; two Marbled Newts (*Molge marmorata*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

NEWLY-DISCOVERED MARKINGS ON SATURN.—*Edinburgh Circular* No. 16, issued by Dr. Copeland on June 10, contains the following information:—

Mr. A. Stanley Williams, of Burgess Hill, Sussex, has discovered three delicate but distinct markings in the equatorial region of Saturn. The first and third of these are round bright spots, somewhat brighter than the white equatorial zone in which they occur. The second is a smaller dark marking on the equatorial edge of the shaded belt which forms the southern boundary of the white zone. Mr. Williams has obtained abundant proof of the reality of these markings, but points out that it requires patience and practice to see them readily. It is very desirable to obtain repeated observations of their times of transit across the planet's central meridian. To facilitate these observations, Mr. Williams has prepared the following table, using 10h. 14·6m. as the provisional time in which the planet rotates on its axis:—

Approximate Greenwich Mean Time at which the Spots may be expected on Saturn's Central Meridian.

1891.	Spot 1 (white).	Spot 2 (dark).	Spot 3 (white).
	h. m.	h. m.	h. m.
June 20	7 50	8 47	10 9
21	4 20	5 17	6 39
22	11 5	12 2	13 24
23	7 32	8 29	9 51
24	4 2	4 59	6 21
25	10 47	11 44	13 6
26	7 14	8 11	9 33
27	3 44	4 41	6 3
28	10 29	11 26	12 48
29	6 56	7 53	9 15
30	3 26	4 23	5 45
July 1	10 11	11 8	12 30
2	6 38	7 35	8 57
3	3 8	4 5	5 27
4	9 53	10 50	12 12
5	6 20	7 17	8 39
6	2 50	3 47	5 9
7	9 35	10 32	11 54
8	6 2	6 59	8 21
9	2 32	3 29	4 51
10	9 17	10 14	11 36

THE ROTATION PERIOD OF VENUS.—The *Bulletin de l'Académie Royale de Belgique*, No. 4, contains a paper, by M. Niesten, of Brussels Observatory, *à propos* the rotation of the planet Venus. The observations and drawings made by M. Stuyvaert and the author from 1881 to 1890 do not appear to confirm the persistence of the dark markings during a long period, as found by Schiaparelli and others. It is also shown that De Vico's period of 23h. 21m. 21·93s. is more in accordance with the observations than Schiaparelli's period of 224·7 days. Twelve drawings of the planet, and a map showing all the markings, accompany the paper.

A NEW ASTEROID (310).—M. Charlois discovered the 310th minor planet on May 16. Its magnitude was 13.

THE ROYAL GEOGRAPHICAL SOCIETY.

THE anniversary meeting of the Royal Geographical Society was held in the University of London on Monday afternoon, the President, Sir Mountstuart Grant-Duff, in the chair. The first business was the award of the medals and other honours for the year. The Founder's Medal was delivered to Sir Dillon Bell, Agent-General for New Zealand, for transmission to Sir James Hector, K.C.M.G., F.R.S., Director of the New Zealand Geological Survey. The Swedish Minister received the Patron's Medal on behalf of Dr. Fridtjof Nansen, who was unable to attend. Other honours were awarded to Mr. William Ogilvie, for his explorations of the Mackenzie and Yukon regions; Lieutenant B. L. Sclater, for instruments to be used in the exploration of Nyassaland; Mr. A. E. Pratt, for his journeys in Szechuen; Mr. W. J. Steains, for his investigations on the Rio Doce, South America. Mr. H. J. Mackinder then introduced the students of the Training Colleges who had been successful in obtaining the prizes offered by the Society annually on the results of the Christmas examinations in geography. Mr. Mackinder spoke briefly on the progress of geographical education, and on the results of the four years' awards to the Training Colleges.

The Secretary then read the annual report of the Society, from which it appears that on May 1 last the total number of Fellows was 3579, being a net increase of 84 on the previous year. The total income up to the end of December 1890 was £9531, and expenditure £8218. The estimated value of the Society's investments is £25,648, and of its total assets £46,248. During the past year, 900 books and pamphlets have been added to the library, and 936 sheets of maps to the map collection, besides 25 atlases, 700 photographs, 151 lantern-slides, and 51 views.

The President then proceeded to deliver the annual address on the progress of geography during the past year, dealing